

# California Board of Registered Nursing

## 2007-2008 Annual School Report

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Data Summary and Historical Trend Analysis

A Presentation of Pre-Licensure Nursing Education Programs in California

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## **PREFACE**

### **Nursing Education Survey Background**

Development of the 2007-2008 Board of Registered Nursing (BRN) School Survey was the work of the Board's Education Advisory Committee (EAC), which consists of directors of nursing education programs, the California Community College Chancellor's Office, the California State University Chancellor's Office and the California Institute of Nursing and Health Care. A list of the EAC members is included in the Appendices. The University of California, San Francisco was commissioned by the BRN to develop the online survey instrument, administer the survey, and report data collected from the survey.

Funding for this project was provided by the California Board of Registered Nursing.

### **Organization of Report**

The survey collects data about nursing programs and their students and faculty from August 1 through July 31. Annual data presented in this report represent August 1, 2007 through July 31, 2008. Demographic information and census data were requested for October 15, 2008.

Data from pre- and post-licensure nursing education programs are presented in separate reports and will be available on the BRN website. Data are presented in aggregate form and describe overall trends in the areas and over the times specified and, therefore, may not be applicable to individual nursing education programs.

Statistics for enrollments and completions represent two separate student populations. Therefore, it is not possible to directly compare enrollment and completion data.

### **Availability of Data**

The BRN Annual School Survey was designed to meet the data needs of the BRN as well as other interested organizations and agencies. A database with aggregate data derived from the 2000-2001 through 2007-2008 BRN School Surveys will be available for public access on the BRN website. Parties interested in accessing data not available on the website should contact the BRN.

The BRN acknowledges that survey respondents may not have had ready access to some of the data that were being requested. To address this issue, a member of the EAC developed a computer program for tracking most of the required data. The computer tracking program was distributed to nursing programs in the fall of 2006. Nursing programs that do not have this program may contact the BRN.

## Value of the Survey

This survey has been developed to support nursing, nursing education and workforce planning in California. The Board of Registered Nursing believes that the results of this survey will provide data-driven evidence to influence policy at the local, state, federal and institutional levels.

The BRN extends appreciation to the Education Advisory Committee and all survey respondents. Your participation has been vital to the success of this project.

## Survey Participation

All California nursing education programs were invited to participate in the survey. Of the 131 pre-licensure programs that admitted students in 2007-2008, all responded to the survey. A list of nursing programs that responded to the survey is provided in the Appendix.

Program Type	# Programs Responded	Total # Programs	Response Rate
ADN	74	74	100.0%
LVN to ADN	10	10	100.0%
BSN	32	32	100.0%
ELM	15	15	100.0%
Sum of Pre-Licensure Programs*	131	131	100.0%

\*Since some nursing schools admit students in more than one program, the number of nursing programs is greater than the number of nursing schools in the state.

## DATA SUMMARY AND HISTORICAL TREND ANALYSIS

This analysis presents pre-licensure program data from the 2007-2008 BRN School Survey in comparison with data from previous years of the survey. Data items addressed include the number of nursing programs, enrollments, completions, retention rates, student and faculty census data, and the use of clinical simulation by nursing programs.

### Trends in Pre-Licensure Nursing Programs

#### *Number of Nursing Programs*

In 2007-2008, California had a total of 131 pre-licensure nursing programs. This represents a net increase of one (0.8%) nursing program since 2006-2007. During the last year, three new programs (two ADN programs and one ELM program) accepted students for the first time. During the same time period, two ELM programs closed. The majority (79.4%) of all pre-licensure nursing programs are public.

#### **Number of Nursing Programs**

	<i>Academic Year</i>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>
<b>Total # Nursing Programs</b>	<b>97</b>	<b>100</b>	<b>101</b>	<b>104</b>	<b>109</b>	<b>117</b>	<b>130</b>	<b>131</b>
ADN Programs	71	72	73	73	76	77	82	84
BSN Programs	22	23	23	23	24	26	32	32
ELM Programs	4	5	5	8	9	14	16	15
Public Programs	83	85	86	87	90	96	105	104
Private Programs	14	15	15	17	19	21	25	27

#### *Admission Spaces and New Student Enrollments*

Admission spaces available for new student enrollments increased by 4.3% (n=494), from 11,475 spaces in 2006-2007 to 11,969 in 2007-2008. These spaces were filled with a total of 13,214 students, increasing new student enrollment by 4.0% (n=505) from 2006-2007.

#### **Availability and Utilization of Admission Spaces**

	<i>Academic Year</i>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>
Spaces Available	6,610	6,719	7,601	7,797	9,026	10,523	11,475	11,969
New Student Enrollments	6,128	6,422	7,457	7,825	8,926	11,131	12,709	13,214
% Spaces Filled	92.7%	95.6%	98.1%	100.4%	98.9%	105.8%	110.8%	110.4%

Despite the increase in available admission spaces, nursing programs receive more applications requesting entrance into their programs than can be accommodated. There was a 17.9% (n=5,110) increase in the number of qualified applications nursing schools received between 2006-2007 and 2007-2008. In 2007-2008, 60.7% (n=20,402) of qualified applications to California nursing education programs were not accepted for admission.

### Student Admission Applications

	<i>Academic Year</i>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>
<b>Qualified Applications</b>	<b>10,021</b>	<b>10,362</b>	<b>13,926</b>	<b>17,887</b>	<b>20,405</b>	<b>28,410</b>	<b>28,506</b>	<b>33,616</b>
ADN	6,924	7,554	9,531	12,585	14,615	19,724	19,559	25,021
BSN	2,635	2,413	3,301	3,964	4,914	7,391	7,004	7,057
ELM	462	395	1,094	1,338	876	1,295	1,943	1,538
% Qualified Applications Not Accepted	38.8%	38.0%	46.5%	56.3%	56.3%	60.8%	55.4%	60.7%

\*Since these data represent applications rather than individuals, the increase in qualified applications may not represent an equal growth in the number of individuals applying to nursing school.

Although new student enrollments in pre-licensure nursing education programs continue to increase, enrollments are growing at slower rates than they have in previous years. The number of students who enrolled in a nursing program in California increased by 4.0% (n=505), from 12,709 in 2006-2007 to 13,214 in 2007-2008. Since 2000-2001, new student enrollments have more than doubled (n=7,086). In the last year, new student enrollment in BSN and ELM programs increased by 17.6% (n=547) and 1.4% (n=10) respectively. Enrollment in ADN programs showed a slight decline (-0.6%, n=52) during the same time period. Despite this decrease in ADN enrollment, the majority of California nursing students continue to be educated in ADN programs.

### New Student Enrollment by Program Type

	<i>Academic Year</i>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>
<b>New Student Enrollment</b>	<b>6,128</b>	<b>6,422</b>	<b>7,457</b>	<b>7,825</b>	<b>8,926</b>	<b>11,131</b>	<b>12,709</b>	<b>13,214</b>
ADN	4,236	4,558	5,316	5,547	6,160	7,778	8,899	8,847
BSN	1,732	1,677	1,903	1,960	2,371	2,709	3,110	3,657
ELM	160	187	238	318	395	644	700	710
Private	951	884	980	1,150	1,614	2,024	2,384	2,704
Public	5,177	5,538	6,477	6,675	7,312	9,107	10,325	10,510

### Student Completions

Although the rate of enrollment growth has slowed in recent years, RN programs continue to graduate students at increasing rates. From 2006-2007 to 2007-2008, the number of students who completed a nursing program in California increased by 14.5% (n=1,209), the largest annual increase in student completions in eight years. The majority of students that completed a nursing program in 2007-2008 (68.5%) did so through an ADN program.

#### Student Completions

	<i>Academic Year</i>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>
<b>Student Completions</b>	<b>5,178</b>	<b>5,346</b>	<b>5,623</b>	<b>6,158</b>	<b>6,677</b>	<b>7,528</b>	<b>8,317</b>	<b>9,526</b>
ADN	3,799	3,826	4,027	4,488	4,769	5,351	5,885	6,527
BSN	1,277	1,394	1,412	1,479	1,664	1,861	2,074	2,481
ELM	102	126	184	191	244	316	358	518

### Retention and Attrition Rates

Of the 9,706 students scheduled to complete a nursing program in the 2007-2008 academic year, 74.2% (n=7,199) completed the program on-time, 9.7% (n=946) are still enrolled in the program, and 16.1% (n=1,561) dropped out or were disqualified from the program. The retention rate has increased 8.0% in the last eight years, from 66.2% in 2000-2001 to 74.2% in 2007-2008.

#### Student Cohort Completion and Retention Data

	<i>Academic Year</i>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005</i>	<i>2005-2006</i>	<i>2006-2007</i>	<i>2007-2008</i>
<b>Enrollment</b>	<b>8,478</b>	<b>6,806</b>	<b>8,208</b>	<b>8,151</b>	<b>8,507</b>	<b>8,208</b>	<b>8,852</b>	<b>9,706</b>
Completed On Time	5,610	4,553	5,621	5,831	6,055	6,047	6,437	7,199
Still Enrolled	1,372	1,184	1,314	1,082	710	849	996	946
Attrition	1,496	1,069	1,273	1,238	1,742	1,312	1,419	1,561
<b>Retention Rate*</b>	66.2%	66.9%	68.5%	71.5%	71.2%	73.7%	72.7%	74.2%
<b>Attrition Rate</b>	17.6%	15.7%	15.5%	15.2%	20.5%	16.0%	16.0%	16.1%
<b>% Still Enrolled</b>	16.2%	17.4%	16.0%	13.3%	8.3%	10.3%	11.3%	9.7%

\*Retention rate = (students who completed the program on-time) / (enrollment)

From 2006-2007 to 2007-2008, attrition rates in ADN and BSN programs remained relatively constant, while rates in ELM programs decreased by 1.7%. Trends in attrition by program type show that ELM programs have lower attrition rates than ADN and BSN programs. Attrition rates in private nursing programs increased by 1.3%, from 7.9% in 2006-2007 to 9.2% in 2007-2008, while rates at public programs remained around 17.7% during the same time period.

### Attrition Rates by Program Type

Program Type	Academic Year							
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
ADN	21.5%	16.9%	19.1%	17.0%	23.7%	18.3%	19.0%	19.3%
BSN	9.0%	14.0%	8.1%	10.8%	11.0%	10.5%	8.7%	8.6%
ELM	3.3%	1.2%	3.2%	4.7%	14.3%	5.0%	7.2%	5.5%
Private	11.7%	12.0%	9.6%	10.1%	15.9%	14.6%	7.9%	9.2%
Public	18.8%	16.5%	16.7%	15.9%	21.2%	16.2%	17.7%	17.6%

There has been fluctuation in the retention and attrition rates over the eight-year period documented in the above tables. There were changes to the survey between 2003-2004 and 2005-2006 that may have affected the comparability of these data over time.

### Student Census Data

The total number of students enrolled in California nursing programs increased by 4.6% (n=1,026), from 22,524 on October 15, 2007 to 23,550 a year later. Of these students, 60.7% (n=14,304) were in ADN programs, 33.8% (n=7,956) in BSN programs, and 5.5% (n=1,290) in ELM programs.

The reported number of pre-nursing students increased by 49.6% (n=7,953) in the last year, from 16,023 in 2007 to 23,976 in 2008. Changes to the survey and fewer nursing programs reporting these data in 2007 (n=26) than in 2008 (n=44) may account for some of the fluctuation in the number of pre-nursing students reported.

### Student Census Data

Program Type	Academic Year							
	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
ADN Program	8,236	8,999	9,547	9,939	11,117	12,632	14,191	14,304
BSN Program		4,235	4,254	5,279	5,669	6,285	6,799	7,956
ELM Program		190	148	368	804	659	896	1,290
<b>Total Nursing Students</b>	<b>12,661</b>	<b>13,401</b>	<b>15,194</b>	<b>16,412</b>	<b>18,061</b>	<b>20,327</b>	<b>22,524</b>	<b>23,550</b>
Pre-Nursing Students					28,478	20,980	16,023	23,976

\*Blank cells indicated that the applicable information was not requested in the given year.

\*\*Changes in the survey may have accounted for the fluctuation in the number of pre-nursing students reported.

### *Clinical Simulation in Nursing Education*

Data show that 57.1% (n=68) of the 119 nursing schools in California used a clinical simulation center<sup>1</sup> between 8/1/07 and 7/31/08. The majority of schools that used a clinical simulation center in 2007-2008 reported that they used these facilities to standardize clinical experiences, to provide clinical experience not available in a clinical setting, to check clinical competencies, and to make up for clinical experiences. Most of the schools did not use a clinical simulation center as a method of increasing capacity in their nursing programs. Of the 68 schools that used clinical simulation centers in 2007-2008, 83.8% (n=57) plan to expand the center.

<b>Reasons for Using a Clinical Simulation Center*</b>	<b>2007-2008</b>
To standardize clinical experiences	80.9%
To provide clinical experience not available in a clinical setting	73.5%
To check clinical competencies	69.1%
To make up for clinical experiences	55.9%
To increase capacity in your nursing program	22.1%
<b>Number of schools that use a clinical simulation center</b>	<b>68</b>

\*These data were collected for the first time in 2006-2007. However, changes in these questions for the 2007-2008 administration of the survey and lack of confidence in the reliability of the 2006-2007 data prevent comparability of the data. Therefore, data from previous years of the survey are not shown.

### *Faculty Census Data*

The total number of nursing faculty increased by 5.0% (n=165) over the last year. On October 15, 2008, there were 3,447 total nursing faculty. Of these faculty, 40.4% (n=1,394) were full-time and 59.6% (n=2,053) were part-time.

Although there was an increase in the total number of nursing faculty in 2008, that increase has not kept pace with the need for faculty. On October 15, 2008, there were 170 vacant faculty positions. These vacancies represent a 4.7% faculty vacancy rate, which is lower than faculty vacancy rates reported in the previous three years.

### **Faculty Census Data**

	<b>Academic Year</b>							
	<i>2000-2001</i>	<i>2001-2002</i>	<i>2002-2003</i>	<i>2003-2004</i>	<i>2004-2005*<sup>1</sup></i>	<i>2005-2006*</i>	<i>2006-2007*</i>	<i>2007-2008</i>
<b>Total Faculty</b>	<b>1,840</b>	<b>1,957</b>	<b>2,031</b>	<b>2,207</b>	<b>2,432</b>	<b>2,723</b>	<b>3,282</b>	<b>3,447</b>
<i>Full-time</i>	1,047	1,090	1,087	1,061	930	1,102	1,374	1,394
<i>Part-time</i>	793	867	944	1,146	959	1,619	1,896	2,053
<b>Vacancy Rate**</b>		<b>4.1%</b>	<b>5.9%</b>	<b>3.7%</b>	<b>6.0%</b>	<b>6.6%</b>	<b>5.9%</b>	<b>4.7%</b>
<i>Vacancies</i>		83	128	84	154	193	206	170

\*The sum of full- and part-time faculty did not equal the total faculty reported in 2003-04, 2004-05, and 2005-06.

\*\*Vacancy rate = number of vacancies/(total faculty + number of vacancies)

1 - Faculty vacancies were estimated based on the vacant FTEs reported.

<sup>1</sup> Clinical simulation center - students have a simulated real-time nursing care experience using hi-fidelity mannequins and clinical scenarios, which allow them to integrate, apply, and refine specific skills and abilities that are based on theoretical concepts and scientific knowledge. The experience includes videotaping, de-briefing and dialogue as part of the learning process.

### *Summary*

In the past eight years, the number of California pre-licensure nursing programs has grown by 35.1%, to 131 programs in 2007-2008. Since 2000-2001, new student enrollments have more than doubled (n=7,086). Although admission spaces and new student enrollments in these programs have grown, data indicate that the rate of enrollment growth has declined in 2007-2008 as compared to the past four years. Enrollment growth peaked at 24.7% in 2005-2006 and has declined for the past two years, 14.2% in 2006-2007 and 4.0% in 2007-2008. This decline in enrollment growth may signify a new trend in nursing program expansion in California.

Nursing programs continue to produce a growing number of RN graduates. Between 2000-2001 and 2007-2008, graduations increased by 84.0% (n=4,348). Retention rates in nursing programs have increased by 8.0% since 2000-2001, while attrition rates have remained around 16% since 2004-2005. However, if the rate of enrollment growth continues to decline and retention rates do not improve, graduations from these programs may also decrease.

Expansion in RN education has required nursing programs to hire more faculty to teach the growing number of students. Although the number of nursing faculty has grown by 87.3% (n=1,607) since 2000-2001, faculty hires have not kept pace with the growth in California pre-licensure nursing programs. In 2007-2008, 170 faculty vacancies were reported, representing a faculty vacancy rate of 4.7%. Although this vacancy rate is the lowest reported in four years, RN programs will not be able to continue their expansion without more faculty.

## APPENDICES

### APPENDIX A – List of Survey Respondents by Degree Program

#### *ADN Programs (74)*

American River College	Los Angeles Southwest College
Antelope Valley College	Los Angeles Trade-Tech College
Bakersfield College	Los Angeles Valley College
Butte Community College	Los Medanos College
Cabrillo College	Mendocino College
Cerritos College	Merced College
Chabot College	Merritt College
Chaffey College	Modesto Junior College
Citrus College	Monterey Peninsula College
City College of San Francisco	Moorpark College
College of Marin	Mount Saint Mary's College
College of San Mateo	Mount San Antonio College
College of the Canyons	Mount San Jacinto College
College of the Desert	Napa Valley College
College of the Redwoods	National University
College of the Sequoias	Ohlone College
Contra Costa College	Pacific Union College
Copper Mountain Community College	Palomar College
Cuesta College	Pasadena City College
Cypress College	Rio Hondo College
De Anza College	Riverside Community College
East Los Angeles College	Sacramento City College
El Camino College - Compton Education Center	Saddleback College
El Camino College	San Bernardino Valley College
Evergreen Valley College	San Diego City College
Fresno City College	San Joaquin Delta College
Glendale Community College	Santa Ana College
Golden West College	Santa Barbara City College
Grossmont College	Santa Monica College
Hartnell College	Santa Rosa Junior College
Imperial Valley College	Shasta College
Kaplan College (formerly Maric College)	Sierra College
Long Beach City College	Solano Community College
Los Angeles City College	Southwestern College
Los Angeles County College of Nursing & Allied Health	Ventura College
Los Angeles Harbor College	Victor Valley College
Los Angeles Pierce College	Yuba College

*LVN to ADN Programs (10)*

Allan Hancock College	San Joaquin Valley College
College of the Siskiyous	Unitek College
Gavilan College	West Coast University – Los Angeles
Mira Costa College	* West Coast University – Orange
* Mission College	Western Career College

*BSN Programs (32)*

American University of Health Sciences	CSU Stanislaus
Azusa Pacific University	Dominican University of California
Biola University	Humboldt State University
California Baptist University	Loma Linda University
CSU Bakersfield	Mount Saint Mary's College
CSU Channel Islands	National University
CSU Chico	Point Loma Nazarene University
CSU East Bay	Samuel Merritt College
CSU Fresno	San Diego State University
CSU Fullerton	San Francisco State University
CSU Long Beach	San Jose State University
CSU Los Angeles	Sonoma State University
CSU Northridge	University of California Irvine
CSU Sacramento	University of California Los Angeles
CSU San Bernardino	University of Phoenix - Northern California
CSU San Marcos	University of San Francisco

*ELM Programs (15)*

Azusa Pacific University	San Francisco State University
* California Baptist University	Sonoma State University
CSU Dominguez Hills	University of California Los Angeles
CSU Fresno	University of California San Francisco
CSU Fullerton	University of San Diego
CSU Long Beach	University of San Francisco
CSU Los Angeles	Western University of Health Sciences
Samuel Merritt College	

\* - New programs in 2007-2008

## APPENDIX B – BRN Education Advisory Committee Members

### **BRN Education Advisory Committee Members**

#### **Members**

Sherry Fox, Chair  
 Barbara Whitney  
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 Jim Comins  
 Loucine Huckabay  
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 Marilyn Herrmann  
 Stephanie Leach  
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 California Institute of Nursing and Health Care  
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 California Labor and Workforce Development Agency  
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